12-23-09

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From the Desk of:
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Commissioner for Patents
Attn: Director for submission of prior art
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09/689,573

Subject – Citation of Prior Art under 35 USC - 301

Mr. Director,

A counterpart asserts that two patents are prior art to US Pat **6,502,567** that renders them as having a new question of patentability. Inventor submits this proposed prior art to provide the record with documented position of the inventors.

3,777,732 – Holloway: Device having coacting wheels for projecting tennis balls as applied to US Pat 6,502,567.

Items cited in prior art:
Items from Figs 7, 8 & 27 = the feed system of the tennis ball launcher.
35 – anti-jam assembly = semi-circular shaped plate
36 – coil spring attached at A on plate 35 and at B on hopper 33 = urges balls away from the edge of the plate

Col 7 lines 24 – 50: is a pertinent excerpt from the 732' patent specification describing the feed system used there in.

As noted, 732' provides for an anti-jam assembly (35) to prevent double feeding balls into an aperture opening (70) and is large enough and positioned to prevent balls from dropping onto the rotatable feed gate (40) (the device's feed mechanism). Being positioned above the feed gate as cited, the anti-jam device depicted in 732' is not located nor disclosed to be in a position to prevent jams between the feed gate and the tube opening nor does it disclose a device that forces balls into a feed position (the gaps) of the gate itself. Several mechanical limitations become apparent when the orientations of the feed gate (40), anti-jam assembly (35) and feed tube (70) devices are considered together. This is a horizontal rotatable gate system used and depicted to orient and drop balls one at a time into a lower positioned feed tube. It is not depicted or disclosed that the anti-jam deflects the balls downward into the feed mechanism or up and over a tube extension. Therefore, the anti-jam device could not prevent a jam between the rotating feed

gate and the opening of the feed tube. It could only prevent balls from being double fed through the gate and into the device's feed tube as stated. If the feed mechanism in 732' were sped up in RPMs in attempt to increase the feed rate, more jams would occur between the feed gate and tube's opening. The 732' patent also does not disclose a tube extension to assist in forcing balls into the exit tube.

In direct contrast, the feed mechanism of 567' (a CIP of 6,213,110) provides a device where many balls may be loaded for feeding all at once. As these balls are forced along as the feed mechanism rotates, they then come to and are forced into the entry opening of the exit tube. In 567's teachings, these balls are then forced into the exit tube by the rotating feed mechanism exerting pressure from the paintball across the exit tube opening or tube extension. It is desirable in the teachings of 567' to provide multiple balls being forcibly fed in succession into the exit tube. This stands in direct contrast to the teachings of 732' where it is undesirable to feed multiple balls into the feed tube. The devices from 732' are teachings that could not possibly make a rapid feed paintball loading mechanism where pressure from a feed mechanism is applied through the paintball stack in the exit tube and onto balls in the breech of a paintball gun. The device depicted in 732' could not achieve this result when it is clearly stated that is undesirable to have "multiple balls dropping" into the exit tube at once.

The inventor of 567' contends the 732' patent is not applicable as proper prior art considering the function and overall purpose of the devices disclosed in 567'. It should be considered as non-analogous prior art that was unobvious to persons having ordinary skill in the art (PHOSITA) of "paintball loader design" and more specifically researching and creating the merits of "force feed paintball loader design". Prior paintball loader technologies and devices are what should be viewed as what determined the scope of the state of the art at the time the 567' patent was filed. Although a tennis ball launching machine is submitted here, it performs an entirely different and contrasting function than that of the 567's patent depicting a rapid feed paintball loader. PHOSITA of paintball loader design would not consider a "tennis ball launching mechanism" as the same type of device. To be candid, a rapid fire tennis ball launching mechanism was not the intent of the inventor of 732'. Such a device would be impractical and may cause harm to the tennis athlete if it were to achieve the rates of delivery that paintball markers achieved when the devices of the 567' patent were realized as actual products.

In summary:

- The anti-jam device depicted in 732' does not prevent jams from occurring between the gate (feed mechanism) and the opening of the exit tube. In contrast, 567' teaches an anti-jam device that prevents jams from occurring between the feed mechanism and the exit tube opening.
- The anti-jam of 732' does not deflect balls down into the gaps of the feed mechanism or over the exit tube extension as the 576' patent teaches.
- The anti-jam of 732' is mounted in an entirely different location than the teachings of the 567' patent and is provided and intended for a different and contrasting purpose.

- 732' does not suggest the use of a tube extension. 567' uses such a device to ensure the paintballs move from the loader's feed mechanism and into the exit tube.
- 732' does not teach the use of a detector to detect the presence of paintballs in the exit tube.
- 732' does not teach the use of a microprocessor used in conjunction with the detector.
- 732' teaches the prevention of multiple ball feeding for its proper and intended use of projecting tennis balls for hitting practice by a tennis athlete. 567' teaches multiple ball feeding resulting in force feed technology used for loading markers at extreme cyclic rates used in the sport of paintball.

Inventor submits this prior art due to a claim that the 732' patent causes a new question of patentability over 567'. Inventor believes this is not the case and in fact, the 732' patent is now submitted in its entirety to be placed in the file wrapper. When read against Claims 1, 24 & 25 (the independent claims of 567') the inventors contend in good faith, that there is actually no new question of patentability.

5,507,271 – Actor: Air-Actuated Ball-Throwing device and method therefore

Items cited in prior art:
3 – Flange to prevent more than one ball being loaded at one time. The tab is affixed to the sidewall of the supply bin.
10 – feed control plate.
11 – capture hole located in the plate to allow plate to carry ball to dispensing hole 2
2 – dispensing hole for receiving ball from capture hole 11 and delivering ball to dispensing tube 30.
30 – dispensing tube receiving balls from feed plate

Col 7 Line 52 – Col 8 line 43: is a pertinent excerpt taken from the 271' patent specification describing the feed system used there in.

As noted, Actor 271' provides for a tab or flange (3) to prevent double feeding balls into a dispensing hole (2) and is large enough and positioned to prevent more than one ball from dropping into the hole (2). The flange device being depicted FIG 1 (3) and described as being positioned above the feed hole (11) of plate (10) and dispensing hole (2), depicted in 271' is not located in a position to prevent jams between the feed hole and the dispensing hole nor does it disclose a device that forces balls into a feed position (the hole) of the feed plate itself. By preventing and limiting the balls entering the dispensing tube to only one at a time, a high rate of feeding such as the teachings of 567' suggest, could not be achieved.

Again this is a horizontal rotatable feed system used and depicted to orient and drop balls one at a time into a lower positioned feed tube. In direct observation, the flange assembly of 271' is mounted above the gate as stated. It is not depicted

that the flange forces the balls downward, nor is it disclosed that there is an alternate configuration to allow this by any of the devices in 271'. Therefore, the flange device could not prevent a jam between the rotating feed hole and the opening of the feed tube. It could only prevent balls from being double fed through the feed hole and into the device's feed tube as stated. It should be further noted that the 271' patent does not teach the prevention of jams between the feed mechanism and the flange device. The device depicted in 271' could not achieve this result when it is clearly stated that is undesirable to have multiple balls dropping into the exit tube at once.

The 271' patent is not applicable as proper prior art considering the function and overall purpose of the devices disclosed in 567'. It should be considered as non-analogous prior art that was unobvious to persons having ordinary skill in the art (PHOSITA) of "paintball loader design". Although a ball throwing machine is submitted here, it performs an entirely different and contrasting function than that of the 567's patent depicting a rapid feed paintball loader. Again, a rapid fire golf whiffle ball launching mechanism was not the intent of the inventor of 271'. Such a device would be impractical if it were to achieve the rates of dispensing that paintball markers achieved when the devices of the 567' patent were realized as actual products. Such feed rates could cause serious harm to the athletes trying to hit these balls.

In summary:

- The flange device depicted in 271' does not prevent jams from occurring between the feed mechanism and the opening of the exit tube. In contrast, 567' teaches an anti-jam device that prevents jams from occurring between the feed mechanism and the exit tube opening.
- 271' does not teach the use of such an anti-jam device.
- The feed mechanism of 271' does not force balls into the exit tube as the 576' patent teaches. 271' teaches the prevention of multiple ball feeding for its proper and intended use of launching whiffle balls. 567' teaches multiple balls being fed into the exit tube that enables force feed technology used for loading markers used in the sport of paintball.
- 271' does not suggest the use of a tube extension. 567' uses such a device to ensure the paintballs move from the loader's feed mechanism and into the exit tube.
- 271' does not teach the use of a detector to detect the presence of paintballs in the exit tube.
- 271' does not teach the use of a microprocessor used in conjunction with the detector.
- 271' teaches the prevention of multiple ball feeding for its proper and intended use of projecting whiffle balls for hitting practice by an athlete. 567' teaches multiple ball feeding resulting in force feed technology used for loading markers at extreme cyclic rates used in the sport of paintball.

Force feed paintball loaders are the essence of why the 567' patent was filed in light of properly submitted prior art that discussed paintball loading technologies that were, at the time, the known state of the art.

Inventor submits this prior art due to a claim that the 271' patent causes a new question of patentability for 567'. Inventor believes this is not the case and in fact, the 271' patent is now submitted in its entirety to be placed in the file wrapper. When read against Claims 1, 24 & 25 (the independent claims of 567') the inventors contend in good faith, that there is actually no new question of patentability.

If there is a problem or concern with anything submitted herein please feel free to contact me by mail or phone as listed. If the Director deems it appropriate, Inventors submit that a proper reexam action can take place on this material if he decides that, in fact, there is a new question of patentability.

Thank you for your time.
Respectfully submitted,

12/21/09

Albert G. Schilling
Inventor – 6,502,567

Also attached:
US Pat numbers 6,502,567 – 3,777,732 – 5,507,271

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